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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,477	05/10/2001	Andrew Davies	LD11412	6021

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John F. Beninati
General Electric Company
3135 Easton Turnpike
W3C
Fairfield, CT 06431

EXAMINER

QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/852,477

Applicant(s)

DAVIES ET AL.

Examiner

Kevin Quarterman

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AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0202</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the coating cited in claims 10-13 must be shown or the feature canceled from the claims. No new matter should be entered.
2. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).
3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham (US 5268613) in view of McBride (US 6034473).

7. Regarding independent claim 1, Figures 1 and 2 of Cunningham shows an incandescent lamp comprising at least four linear, helically-wound filament sections (25a-d) arranged with their longitudinal axes substantially parallel with each other and substantially symmetrically around the longitudinal axis of the lamp.

8. Cunningham teaches the limitations of independent claim 1, as discussed above, but fails to exemplify a first filament section located along the longitudinal axis of the lamp.

9. Figure 2 of McBride teaches that it is known in the art to provide a filament section (38) located along the longitudinal axis of an incandescent lamp. McBride discloses that this arrangement is provided for concentrating the emission of light along and about the central axis of the filament (Abstract).

10. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the incandescent lamp of Cunningham with a filament section located along the longitudinal section of the lamp, as taught by McBride, for improving the efficiency of the lamp.

11. Regarding claims 2-4, primary reference Cunningham discloses four or more filament sections (claim 11).

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12. Regarding claim 5, primary reference Cunningham discloses the filament sections connected in series (col. 2, ln. 42-44).

13. Regarding claims 6-7, Figure 2C of primary reference Cunningham shows the filament sections connected in parallel.

14. Regarding claim 8, primary reference Cunningham discloses the filament sections arranged such that the spacing between them is as small as possible without causing a significant risk of arcing (col. 2, ln. 36-37).

15. Regarding claim 14, Figure 1 of primary reference Cunningham shows an illumination arrangement comprising a lamp as claimed in claim 1 arranged axially in a concave reflector (15).

16. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham and McBride as applied to claim 1 above, and further in view of Engels (5962972).

17. Cunningham and McBride teaches all of the limitations of independent claim 1, as discussed earlier, but fails to exemplify the gas inside the lamp comprising hydrogen.

18. Engels teaches that it is known in the art to provide hydrogen inside of an incandescent lamp for obtaining a regenerative cycle (col. 4, ln. 37-38).

19. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a gas comprising hydrogen, as taught by Engels, inside of the lamp of Cunningham and McBride for improving the efficiency of the lamp.

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20. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham and McBride as applied to claim 1 above, and further in view of Kawakatsu (US 5113109).

21. Cunningham and McBride teaches all of the limitations of independent claim 1, as discussed earlier, but fails to exemplify the bulb coated with a material capable of reflecting infrared radiation back to the filament structure.

22. Figures 1 and 2 of Kawakatsu teach that it is known in the art to provide a bulb of an incandescent lamp with a coating comprising a multiplicity of layers, also comprising tantalum oxide and silicon oxide. Kawakatsu discloses that this coating is provided for maintaining the luminous flux of the lamp (col. 1, ln. 50-59).

23. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the bulb of Cunningham and McBride with the coating of Kawakatsu for reflecting infrared radiation.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mochizuki (US 5675218) discloses an incandescent lamp with filament located along the longitudinal axis of the lamp. Kimoto (US 6611102) discloses light bulb with seal portion.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman
Examiner
Art Unit 2879

kq 
February 7, 2004


Nimesh Patel
Supervisory Patent Examiner
Art Unit 2879